Applicants: Anke Althoff, et al. Attorney's Docket No.: 14219-074US1 Client's Ref.: P2002,0642USN

Serial No.: Not Yet Assigned

Filed : Herewith

Page

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for the production of producing a ceramic substrate comprised of including the following steps: [[-]] provision of a basic body (1) base that comprises comprising a stack (1a) of layers (2, 3) stacked on top of one another, each of which contains layer in the stack comprising a non-sintered ceramic material and a binder[[,]] wherein electrically conductive ducts (4) are provided in each of the layers (2, 3), the method comprising:

[[-]] debinding of the layers (2, 3) in a temperature interval of T_{E1} - T_{E3} , where wherein T_{E1} is the a minimum debinding temperature of debinding and $T_{E3} > T_{E1}[[.]]$; and [[- dense]] sintering of the layers (2, 3) at a temperature of T_S , where $T_S \ge T_{E3}[[,]]$; wherein the process steps b) and c) debinding and sintering are performed in one and the a same furnace[[,]]; and

wherein the a temperature T of the base does basic body (1), throughout the entire period from the beginning of process step b) to the end of process step c), is maintained so as not to fall below the minimum temperature T_{E1} of the debinding during debinding and sintering.

2. (Currently Amended) The method according to of claim 1, further comprising:

Applicants: Anke Althoff, et al.

Serial No.: Not Yet Assigned

Attorney's Docket No.: 14219-074US1

Client's Ref.: P2002,0642USN

Filed : Herewith

Page: 5

forming the stack of layers;

wherein forming comprises forming in which, prior to process step a), openings are formed in the layers (2, 3) stacked on top of one another, each being filled and adding a with a metalliferous paste to at least some of the openings.

- 3. (Currently Amended) The method according to of claim 2, wherein a the metalliferous paste is used that contains comprises silver or silver-palladium.
- 4. (Currently Amended) The method of claim 1 according to one of claims 1 to 3, wherein at least two of the layers (2, 3) stacked on top of one another consist of comprise different ceramic materials.
- 5. (Currently Amended) The method of claim 2 according to one of claims 2 to 4, wherein the stack of layers comprises in which a first layer comprised of a first ceramic material and a second layer (2, 3) comprised of a second ceramic material, the second layer being above the which is disposed on top of said first layer; are provided,

wherein the first ceramic material begins to sinter at a temperature T_{S1} , and the second ceramic material begins to sinter at a temperature T_{S3} , wherein and the metalliferous paste begins to sinter at a temperature $T_{S2}[[,]]$; and

wherein the following applies: $T_{S1} \le T_{S2} \le T_{S3}$.

Applicants: Anke Althoff, et al.

Serial No.: Not Yet Assigned

Attorney's Docket No.: 14219-074US1

Client's Ref.: P2002,0642USN

Filed : Herewith

Page: 6

6. (Currently Amended) The method according to of claim 5, wherein, following sintering, the first ceramic material is selected in such a way that in the sintered state it has a relative permittivity ε_1 , where to which applies: $7 \le \varepsilon_1 \le 8.5$ [[,]]; and

wherein, following sintering, the second ceramic material is selected in such a way that in the sintered state it has a relative permittivity ϵ_2 , where to which applies: $18 \le \epsilon_1 \le 22$.

- 7. (Currently Amended) The method according to one of claims claim 2 to 6, in which wherein forming comprises providing structured metallization layers between layers in the stack comprised of sintered ceramic material, the structured metallization layers comprising which are made of the metalliferous paste, are provided between the layers (2, 3) disposed on top of one another.
- 8. (Currently Amended) The method according to of claim 5 6, further comprising forming in which at least one of the layers of the first ceramic material forms a stratified compound using the first layer and the second layer, the ceramic substrate comprising plural with at least one of the layers of the second ceramic material, wherein several of such stratified compounds; and are formed,

wherein each of the forming structured metallization layers is formed between the stratified compounds.

Applicants: Anke Althoff, et al.

Attorney's Docket No.: 14219-074US1

Serial No.: Not Yet Assigned Client's Ref.: P2002,0642USN

Filed : Herewith

Page: 7

9. (Currently Amended) The method of claim 1 according to one of claims 1 to 8, wherein debinding and sintering in which process steps b) and c) are performed in an inert atmosphere.

- 10. (Currently Amended) The method of claim 1 according to one of claims 1 to 8, wherein debinding an sintering in which process steps b) and c) are performed in an air atmosphere.
- 11. (Currently Amended) The method of claim 1, wherein, during debinding, according to one of claims 1 to 8, in which the an atmosphere in the furnace in which debinding takes place changes is converted from an inert atmosphere to an air atmosphere during process step b).
- 12. (Currently Amended) The method according to of claim 11, wherein in which, in process step b), a first part of the debinding is performed in begins at a temperature between interval of T_{E1} T_{E2} while and the temperature increases at a substantially constant rate is increased monotonically, wherein where $T_{E1} < T_{E2} < T_{E3}[[,]]$; whereafter in which, subsequently, the temperature T is reduced decreases to a value of $T_{E1'}$, where $T_{E1} < T_{E2}[[,]]$; whereafter in which, subsequently, the temperature T is monotonically increased increases at a substantially constant rate to the a value T_{E3} .

Applicants: Anke Althoff, et al. Attorney's Docket No.: 14219-074US1

Serial No.: Not Yet Assigned Client's Ref.: P2002,0642USN

Filed : Herewith

Page: 8

13. (Currently Amended) The method according to of claim 12, wherein a in which the first part of the debinding is performed in an inert atmosphere that is inert[[,]]; and

wherein, during debinding, the atmosphere in the furnace changes in which the atmosphere in the furnace is converted to an air atmosphere concurrently with the in accordance with a reduction in temperature to a value of $T_{E1} \le T_{E1}$.